



US 20090237364A1

(19) **United States**(12) **Patent Application Publication**
Bloomcamp et al.(10) **Pub. No.: US 2009/0237364 A1**(43) **Pub. Date: Sep. 24, 2009**(54) **FEEDBACK-PROVIDING KEYPAD FOR
TOUCHSCREEN DEVICES**(52) **U.S. Cl. 345/173**(75) **Inventors:** **Eric M. Bloomcamp**, Olathe, KS
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G06F 3/041 (2006.01)(57) **ABSTRACT**

Computer-readable media, computerized methods, and a touchscreen device manipulating user-input elements are provided. Generally, manipulation includes identifying a predefined configuration associated with a request received from a user and/or application, deriving configuration settings from the predefined configuration, and transmitting the configuration settings to an electromechanical device that adjusts a portion of user-input elements to an extended orientation and activates a portion of user-input elements. In embodiments, the extended user-input elements positioned in the extended orientation are activated, while the remainder are set to an idle condition. Typically, the extended user-input elements produce outwardly-extending protrusions expressed at a flexible touchpad incorporated in the touchscreen device. These outwardly-extending protrusions may replicate keys of a standard keyboard and correspond with the presently-running application implemented on the touchscreen device. User-initiated actuations of activated user-input elements provide a tactile feedback that substantially simulates a click generated by standard keyboard keys.

